MONTHLY WEATHER REVIEW.

Editor: Prof. CLEVELAND ABBE.

VOL. XXV. AUGUST, 1897. No. 8

INTRODUCTION.

The MONTHLY WEATHER REVIEW for August, 1897, is based on 2,864 reports from stations occupied by regular and voluntary observers, classified as follows: 144 from Weather Bureau stations; numerous special river stations; 33 from post surgeons, received through the Surgeon General, United States Army; 2,525 from voluntary observers; 96 received through the Southern Pacific Railway Company; 14 from Life-Saving stations, received through the Superintendent United States Life-Saving Service; 32 from Canadian stations; 20 from Mexican stations; 7 from Jamaica, W. I. International simultaneous observations are received from a few stations and used together with trustworthy newspaper extracts and special reports.

Special acknowledgment is made of the hearty cooperation of Prof. R. F. Stupart, Director of the Meteorological Service of the Dominion of Canada; Mr. Curtis J. Lyons, Meteorologist to the Government Survey, Honolulu; Dr. Mariano Bárcena, Director of the Central Meteorological Observatory of Mexico; Mr. Maxwell Hall, Government Meteorologist, Kingston, Jamaica; and Commander J. E. Craig, Hydrographer, United States Navy.

The REVIEW is prepared under the general editorial supervision of Prof. Cleveland Abbe. Unless otherwise specifically noted, the text is written by the Editor, but the meteorological tables contained in the last section are furnished by Mr. A. J. Henry, Chief of the Division of Records and Meteorological Data.

Attention is called to the fact that the clocks and self-registers at regular Weather Bureau stations are all set to seventy-fifth meridian or eastern standard time, which is exactly five hours behind Greenwich time, and, as far as practicable, only this standard of time is used in the text of the REVIEW, since all Weather Bureau observations are required to be taken and recorded by it. The standards used by the public in the United States and Canada and by the voluntary observers are believed to generally conform to the modern international system of standard meridians, one hour apart, beginning with Greenwich. Records of miscellaneous phenomena that are reported occasionally in other standards of time by voluntary observers or newspaper correspondents are generally corrected to agree with the eastern standard; otherwise, the local meridian is mentioned.

CLIMATOLOGY OF THE MONTH.

GENERAL CHARACTERISTICS.

During August no hurricanes reached the United States from the West Indies, but one is reported to have struck the coast of Mexico and Gulf of California on the 6th and 7th; very few severe local storms were reported. Rainfall was very generally deficient and the temperature in excess. Agricultural interests generally begin to feel the increasing dryness of the air and the failure of rainfall; these latter features have been characteristic of the southern Pacific Ocean, Australia, and India for some years past, and the same causes that have produced the great drought in that region have evidently affected North America to a less extent.

ATMOSPHERIC PRESSURE.

[In inches and hundredths.]

The distribution of mean atmospheric pressure reduced to sea level, as shown by mercurial barometers, not reduced to standard gravity, and as determined from observations taken daily at 8 a. m. and 8 p. m. (seventy-fifth meridian time), is shown by isobars on Chart IV. That portion of the reduction to standard gravity that depends on latitude is shown by the numbers printed on the right-hand border.

The *mean pressure* during the current month was lowest in Nevada and Arizona and low in Saskatchewan and the Gulf of St. Lawrence; it was highest from Bermuda to the south Atlantic and Gulf coasts and high off the coast of Washington.

The highest reduced pressures were: In the United States, Key West, Jupiter, Tampa, and Charleston, 30.07. In Canada, Bermuda, 30.16. The lowest were: In the United States, Yuma, 29.76; Tucson, 29.77. In Canada, Kamloops, 29.83; Prince Albert, 29.86; Father Point, 29.87.

As compared with the normal for August, the mean pressure was in excess from the Mississippi to the Rocky Mountain Plateau, but deficient over the lower Lakes and the Middle States.

The greatest excesses were: In the United States, Denver, 0.11; Helena, 0.08; Lander and Bismarck, 0.07. In Canada, Minnedosa, 0.07; Edmonton, 0.05. The largest deficits were: In the United States, Roseburg, 0.09; Portland, Oreg., 0.07; Oswego and Portland, Me., 0.05.

As compared with the preceding month of July, the pressures reduced to sea level show a fall over New England and the Maritime Provinces and throughout the Pacific Coast region, but a rise from the Gulf States northward to the northwest provinces of Churchill and Franklin.

The largest rises were: In the United States, Bismarck, 0.15; Moorhead, 0.14. In Canada, Battleford, Prince Albert, and Winnipeg, 0.14. The largest falls were: In the United States, Portland, Oreg., 0.13; Roseburg, 0.12; Fort Canby, 0.11; Tatoosh Island, 0.10. In Canada, Father Point, 0.10.

AREAS OF HIGH AND LOW PRESSURE.

By Prof. H. A. HAZEN.

During the month the positions of eight highs and nine